C590
10/09 #2
OIPE

RAW SEQUENCE LISTING   DATE: 09/25/2001
PATENT APPLICATION: US/09/783,338   TIME: 09:58:12

Input Set : N:\Crf3\RULE60\09783338.txt
Output Set: N:\CRF3\09252001\I783338.raw

SEQUENCE LISTING
3 (1) GENERAL INFORMATION:
5   (i) APPLICANT: Glazer, Peter M.
6   Havre, Pamela A.
8   (ii) TITLE OF INVENTION: Chemically Modified Oligonucleotide for
9   Site-Directed Mutagenesis
11   (iii) NUMBER OF SEQUENCES: 13
13   (iv) CORRESPONDENCE ADDRESS:
14   (A) ADDRESSEE: Patrea L. Pabst
15   (B) STREET: 1100 Peachtree Street, Suite 2800
16   (C) CITY: Atlanta
17   (D) STATE: Georgia
18   (E) COUNTRY: USA
19   (F) ZIP: 30309-4530

ENTERED

21   (v) COMPUTER READABLE FORM:
22   (A) MEDIUM TYPE: Floppy disk
23   (B) COMPUTER: IBM PC compatible
24   (C) OPERATING SYSTEM: PC-DOS/MS-DOS
25   (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
27   (vi) CURRENT APPLICATION DATA:
C--> 28   **(A) APPLICATION NUMBER: US/09/783,338**
C--> 29   **(B) FILING DATE: 14-Feb-2001**
30   (C) CLASSIFICATION:
32   (vii) PRIOR APPLICATION DATA:
33   (A) APPLICATION NUMBER: US 08/083,088
34.   (B) FILING DATE: 25-JUN-1993
38   (viii) ATTORNEY/AGENT INFORMATION:
39   (A) NAME: Pabst, Patrea L.
40   (B) REGISTRATION NUMBER: 31,284
41   (C) REFERENCE/DOCKET NUMBER: YU109
44   (ix) TELECOMMUNICATION INFORMATION:
45   (A) TELEPHONE: (404)-815-6508
46   (B) TELEFAX: (404)-815-6555
48 (2) INFORMATION FOR SEQ ID NO: 1:
50   (i) SEQUENCE CHARACTERISTICS:
51   (A) LENGTH: 11 base pairs
52   (B) TYPE: nucleic acid
53   (C) STRANDEDNESS: single
54   (D) TOPOLOGY: linear
56   (ii) MOLECULE TYPE: DNA (genomic)
58 · (iii) HYPOTHETICAL: NO
60   (iv) ANTI-SENSE: NO
62   (ix) FEATURE:
63   (A) NAME/KEY: misc_feature
64   (B) LOCATION: 1..11
65   (D) OTHER INFORMATION: /function= "N is
66 4'-hydroxymethyl-4,5',8-trimethylpsoralen"

RAW SEQUENCE LISTING   DATE: 09/25/2001
PATENT APPLICATION: US/09/783,338   TIME: 09:58:12

Input Set : N:\Crf3\RULE60\09783338.txt
Output Set: N:\CRF3\09252001\I783338.raw

```
68      (x) PUBLICATION INFORMATION:
69            (A) AUTHORS: Glazer, Peter M.
70 Havre, Pamela A.
71            (K) RELEVANT RESIDUES IN SEQ ID NO:1: FROM 1 TO 11
73      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
75 NAGGAAGGGG G                                                    11
81 (2) INFORMATION FOR SEQ ID NO: 2:
83      (i) SEQUENCE CHARACTERISTICS:
84            (A) LENGTH: 10 base pairs
85            (B) TYPE: nucleic acid
86            (C) STRANDEDNESS: single
87            (D) TOPOLOGY: linear
89      (ii) MOLECULE TYPE: DNA (genomic)
91      (iii) HYPOTHETICAL: NO
93      (iv) ANTI-SENSE: NO
95      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
97 AGGAAGGGGG                                                      10
99 (2) INFORMATION FOR SEQ ID NO: 3:
101     (i) SEQUENCE CHARACTERISTICS:
102           (A) LENGTH: 10 base pairs
103           (B) TYPE: nucleic acid
104           (C) STRANDEDNESS: single
105           (D) TOPOLOGY: linear
107     (ii) MOLECULE TYPE: DNA (genomic)
109     (iii) HYPOTHETICAL: NO
111     (iv) ANTI-SENSE: NO
113     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
115 GGGGGAAGGA                                                     10
118 (2) INFORMATION FOR SEQ ID NO: 4:
120     (i) SEQUENCE CHARACTERISTICS:
121           (A) LENGTH: 8 base pairs
122           (B) TYPE: nucleic acid
123           (C) STRANDEDNESS: single
124           (D) TOPOLOGY: linear
126     (ii) MOLECULE TYPE: DNA (genomic)
128     (iii) HYPOTHETICAL: NO
130     (iv) ANTI-SENSE: NO
132     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
134 CCCCCTTC                                                       8
136 (2) INFORMATION FOR SEQ ID NO: 5:
138     (i) SEQUENCE CHARACTERISTICS:
139           (A) LENGTH: 11 base pairs
140           (B) TYPE: nucleic acid
141           (C) STRANDEDNESS: single
142           (D) TOPOLOGY: linear
144     (ii) MOLECULE TYPE: DNA (genomic)
146     (iii) HYPOTHETICAL: NO
148     (iv) ANTI-SENSE: NO
150     (ix) FEATURE:
```

```
151          (A) NAME/KEY: misc_feature
152          (B) LOCATION: 1..11
153          (D) OTHER INFORMATION: /function= "N is
154 4'-hydroxymethyl-4,5',8-trimethylpsoralen"
156     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
158 NGGGGGAAGG A                                              11
160 (2) INFORMATION FOR SEQ ID NO: 6:
162     (i) SEQUENCE CHARACTERISTICS:
163          (A) LENGTH: 18 base pairs
164          (B) TYPE: nucleic acid
165          (C) STRANDEDNESS: single
166          (D) TOPOLOGY: linear
168     (ii) MOLECULE TYPE: DNA (genomic)
170    (iii) HYPOTHETICAL: NO
172     (iv) ANTI-SENSE: NO
174     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
176 GGTTCGAATC CTTCCCCC                                       18
178 (2) INFORMATION FOR SEQ ID NO: 7:
180     (i) SEQUENCE CHARACTERISTICS:
181          (A) LENGTH: 18 base pairs
182          (B) TYPE: nucleic acid
183          (C) STRANDEDNESS: single
184          (D) TOPOLOGY: linear
186     (ii) MOLECULE TYPE: DNA (genomic)
188    (iii) HYPOTHETICAL: NO
190     (iv) ANTI-SENSE: NO
194     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
196 GGTTCGAAAC CTTCCCCC                                       18
198 (2) INFORMATION FOR SEQ ID NO: 8:
200     (i) SEQUENCE CHARACTERISTICS:
201          (A) LENGTH: 35 base pairs
202          (B) TYPE: nucleic acid
203          (C) STRANDEDNESS: single
204          (D) TOPOLOGY: linear
206     (ii) MOLECULE TYPE: DNA (genomic)
208    (iii) HYPOTHETICAL: NO
210     (iv) ANTI-SENSE: NO
212     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
214 TGGTGGTGGG GGAAGGATTC GAACCTTCGA AGTCG                    35
216 (2) INFORMATION FOR SEQ ID NO: 9:
218     (i) SEQUENCE CHARACTERISTICS:
219          (A) LENGTH: 35 base pairs
220          (B) TYPE: nucleic acid
221          (C) STRANDEDNESS: single
222          (D) TOPOLOGY: linear
224     (ii) MOLECULE TYPE: DNA (genomic)
226    (iii) HYPOTHETICAL: NO
228     (iv) ANTI-SENSE: NO
232     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
```

RAW SEQUENCE LISTING   DATE: 09/25/2001
PATENT APPLICATION: US/09/783,338   TIME: 09:58:12

Input Set : **N:\Crf3\RULE60\09783338.txt**
Output Set: **N:\CRF3\09252001\I783338.raw**

```
234 CGACTTCGAA GGTTCGAATC CTTCCCCCAC CACCA                               35
236 (2) INFORMATION FOR SEQ ID NO: 10:
238      (i) SEQUENCE CHARACTERISTICS:
239              (A) LENGTH: 121 base pairs
240              (B) TYPE: nucleic acid
241              (C) STRANDEDNESS: single
242              (D) TOPOLOGY: linear
244     (ii) MOLECULE TYPE: DNA (genomic)
246    (iii) HYPOTHETICAL: NO
248     (iv) ANTI-SENSE: NO
250     (ix) FEATURE:
251              (A) NAME/KEY: misc_feature
252              (B) LOCATION: 1..60
253              (D) OTHER INFORMATION: /function= "At positions 16 and 57,
254 N is G or T."
256     (ix) FEATURE:
257              (A) NAME/KEY: misc_feature
258              (B) LOCATION: 1..121
259              (D) OTHER INFORMATION: /function= "At position 17, N is A,
260 G or T."
262     (ix) FEATURE:
263              (A) NAME/KEY: misc_feature
264              (B) LOCATION: 1..121
265              (D) OTHER INFORMATION: /function= "At position 18, N is A,
266 C or T."
269     (ix) FEATURE:
270              (A) NAME/KEY: misc_feature
271              (B) LOCATION: 1..121
272              (D) OTHER INFORMATION: /function= "At position 20, N is G
273 or A."
275     (ix) FEATURE:
276              (A) NAME/KEY: misc_feature
277              (B) LOCATION: 1..121
278              (D) OTHER INFORMATION: /function= "At position 24, N is C
279 or T."
281     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
283 TGGTGGTGGG GGAAGNNNTN GAANCTTCGA AGTCGATGAC GGCAGATTTA GAGTCTNCTC     60
285 CCTTTGGCCG CTCGGGAACC CCACCACAGG TAATGCTTTT ACGGGGCGCA TCATATCAAA    120
287 T                                                                    121
289 (2) INFORMATION FOR SEQ ID NO: 11:
291      (i) SEQUENCE CHARACTERISTICS:
292              (A) LENGTH: 121 base pairs
293              (B) TYPE: nucleic acid
294              (C) STRANDEDNESS: single
295              (D) TOPOLOGY: linear
297     (ii) MOLECULE TYPE: DNA (genomic)
299    (iii) HYPOTHETICAL: NO
301     (iv) ANTI-SENSE: NO
303     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
```

RAW SEQUENCE LISTING   DATE: 09/25/2001
PATENT APPLICATION: US/09/783,338   TIME: 09:58:12

Input Set : N:\Crf3\RULE60\09783338.txt
Output Set: N:\CRF3\09252001\I783338.raw

```
305 ATTTGATATG ATGCGCCCCG TAAAAGCATT ACCTGTGGTG GGGTTCCCGA GCGGCCAAAG    60
307 GGAGCAGACT CTAAATCTGC CGTCATCGAC TTCGAAGGTT CGAATCCTTC CCCCACCACC   120
309 A                                                                  121
```
311 (2) INFORMATION FOR SEQ ID NO: 12:
313   (i) SEQUENCE CHARACTERISTICS:
314   (A) LENGTH: 121 base pairs
315   (B) TYPE: nucleic acid
316   (C) STRANDEDNESS: single
317   (D) TOPOLOGY: linear
319   (ii) MOLECULE TYPE: DNA (genomic)
321   (iii) HYPOTHETICAL: NO
323   (iv) ANTI-SENSE: NO
326   (ix) FEATURE:
327   (A) NAME/KEY: misc_feature
328   (B) LOCATION: 1..121
329   (D) OTHER INFORMATION: /function= "At position 7, N is G
330 or T."
332   (ix) FEATURE:
333   (A) NAME/KEY: misc_feature
334   (B) LOCATION: 1..121
335   (D) OTHER INFORMATION: /function= "At positions 12, 20 and
336 117, N is C or G."
338   (ix) FEATURE:
339   (A) NAME/KEY: misc_feature
340   (B) LOCATION: 1..121
341   (D) OTHER INFORMATION: /function= "At positions 15, 16,
342 21, 29, 78, 83 and 108, N is A or G."
343   (ix) FEATURE:
344   (A) NAME/KEY: misc_feature
345   (B) LOCATION: 1..121
346   (D) OTHER INFORMATION: /function= "At positions 18, 49,
347 68, 69, and 107, N is C or T."
348   (ix) FEATURE:
349   (A) NAME/KEY: misc_feature
350   (B) LOCATION: 1..121
351   (D) OTHER INFORMATION: /function= "At position 114, N is
352 C, T or A."
354   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
```
356 TGGTGGNGGG GNAANNANTN NAACCTTCNA AGTCGATGAC GGCAGATTNN GAGTCTNCTC    60
358 CCTTTGGNNG CTCGGGANCC CCNCCACAGG TAATGCTTTT ACGGGGNNCA TCANNTNAAA   120
360 T                                                                  121
```
363 (2) INFORMATION FOR SEQ ID NO: 13:
365   (i) SEQUENCE CHARACTERISTICS:
366   (A) LENGTH: 121 base pairs
367   (B) TYPE: nucleic acid
368   (C) STRANDEDNESS: single
369   (D) TOPOLOGY: linear
371   (ii) MOLECULE TYPE: DNA (genomic)
373   (iii) HYPOTHETICAL: NO

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/783,338

DATE: 09/25/2001
TIME: 09:58:13

Input Set : N:\Crf3\RULE60\09783338.txt
Output Set: N:\CRF3\09252001\I783338.raw

L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]